

REMARKS/ARGUMENT

Claims 1-4 are pending. Claims 1 and 3 have been amended. Claim 1 is the only independent claim. The specification has been amended to address a formal matter. No new matter has been added.

Initially, Applicant requests acknowledgement of two Information Disclosure Statement submissions for which initialed PTO-1449 forms were not included in the Office Action. In particular, initialed PTO-1449 forms were not received for the submission filed with the original application papers, and the submission that was dated August 7, 2000. For the Examiner's convenience, copies of those papers are submitted herewith.

The drawings were objected to under 37 C.F.R. 1.83(a) as allegedly failing to show the recitation of claim 3 of the "data discrimination circuit for discriminating bits corresponding to the coded data outputted from said puncture. Applicant traverses.

The specification, at page 20, lines 1 et seq., states that the data discrimination circuit 505 receives the puncture processing operation mode for the coding control circuit 500 and outputs validity of the data to the data discrimination control lines 118-(1) to 118-(q) corresponding to those of the coded data output lines 119-(1) to 119-(q), which, as can be seen in Figure 6, are output from the puncture circuit 504. Thus, it is clear that the bits discriminated by the data discrimination unit (505) correspond to the data outputted from the puncture circuit (504), as claimed.

In view of this traversal, no drawings changes are being submitted herewith and withdrawal of the objection is requested.

Claims 1, 2 and 4 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,370,202 (Wolcott).

Independent claim 1 is believed patentable for at least the following reasons.

Independent claim 1 is directed to a multi-rate transmission apparatus in which a coding ratio is varied in accordance with an input modulation operation mode to allow a transmission operation with a single input clock signal in accordance with the input modulation mode. The apparatus comprises: data processing means for reading in data having a bit width suitable for a modulation system corresponding to the input modulation mode, coding means for performing coding processing parallelly for the data read in by the data processing means, and transmission means for transmitting the data, for which the coding processing has been performed, in accordance with the modulation system and the varied coding ratio.

As a result of the recited structure, on the basis of a input clock and an input modulation mode, data can be transmitted, in accordance with the input modulation mode, even if the coding rate is varied.

Wolcott, as understood, shows a self-selective multi-rate transmitter that automatically, in response to variable input data, using a multitude of modulation formats, transmits data at a constant symbol rate without a priori knowledge of the input data rate. Wolcott sets a modulation mode, e.g., BPSK, QPSK, 16QAM, appropriate for the current data rate being input to the transmitter. SIMO 11 accepts variable rate data and generates the

appropriate number of parallel output data streams, depending on the data rate. Col. 3, lines 4-9. The faster the rate, the more parallel data streams are created, one for each bit in the required M-ary signal constellation. That is, for BPSK, a single parallel data stream is created, while for 16QAM, four such streams are created, and so forth. The modulation mode is set and the data formatted so that the transmitter transmits at a constant symbol rate, the bits associated with each symbol being adjusted (by adjusting which modulation type is used) to handle different amounts of data required to be output.

The transmitter of Wolcott selects the appropriate modulation mode without receiving any outside command. This is the reason the transmitter is called "self-selective". See col. 3, lines 22-25. Wolcott has no teaching or suggestion of the modulation operation mode being input, as is recited in claim 1. Indeed, the purpose of the design of the transmitter described in the Wolcott patent is to be able to operate without the mode being selected by an input from outside of the transmitter. Rather, the transmitter self-selects the appropriate modulation operation mode on the basis of the rate of the input data. Also, because Wolcott does not teach the use of an input modulation operation mode, and in fact teaches away from it at least at col. 3, lines 22-25, it cannot be said to teach data processing means for reading in data having a bit width suitable for a modulation system *corresponding to the input modulation mode*, as is recited in claim 1

Accordingly, claim 1 is believed clearly patentable over Wolcott.

The other claims in this application are each dependent from independent claim 1 discussed above and are therefore believed patentable for the same reasons. Since each

Application No.: 09/540,289

Docket No.: H2041.0047

dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

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Respectfully submitted,

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